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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,303	10/15/2003	Kentaro Nagoshi	SIW-067	9456
959	7590	08/30/2006	EXAMINER	
LAHIVE & COCKFIELD 28 STATE STREET BOSTON, MA 02109			ALEJANDRO, RAYMOND	
			ART UNIT	PAPER NUMBER

1745

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/688,303

Applicant(s)

NAGOSHI ET AL.

Examiner

Raymond Alejandro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 6-15 is/are pending in the application.
- 4a) Of the above claim(s) 7-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08/11/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The following is an office submission in response to the amendment filed on 08/17/06. Applicant has overcome only the objections, the 35 USC 112 rejection and the 35 USC 102/103 rejection over the AAPA. Refer to the abovementioned amendment for more details concerning applicant's rebuttal arguments and remarks. In sum, a new ground of rejection under section 103 based upon the JP'153 reference is added to the 35 USC 102 rejection over the same reference to adequately reject all active claims as follows below. Therefore, pending claims 1 and 6 are finally rejected, as set forth infra, for the reasons of record:

Election/Restrictions

1. Claims 7-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 05/11/06.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by the Japanese publication 2000-208153 (hereinafter referred to as the JP'153).

The present claims are geared toward a separator assembly wherein the disclosed inventive concept comprises the specific diffusion layer and separator being joined (welded).

As to claim 1:

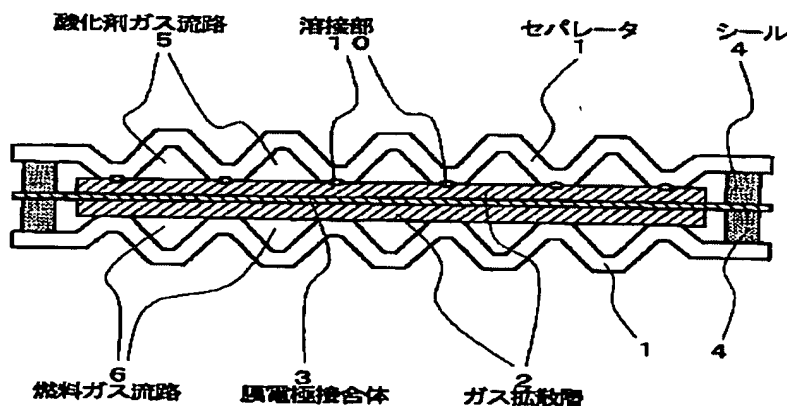
The JP'153 discloses a porous metallic gas diffusion layer for diffusing fuel cell reactants (ABSTRACT/P0007). The gas diffusion layer is made of stainless steel (ABSTRACT).

The JP'153 also discloses a metallic separator which is positioned adjacent to the gas diffusion layer (ABSTRACT/P0005).

Both the gas diffusion layer and the metallic separator are bonded by resistance welding at a welding part 10. *Thus, they are welded together.*

Figure 1 below illustrates the gas diffusion layer 2 and the separator 1 adjacent to each other; the gas flow channels 5 and 6; and the welding parts 10.

【図 1】



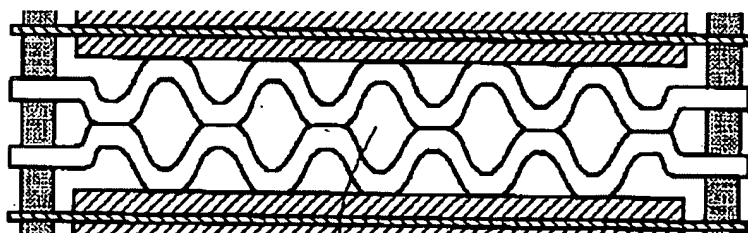
Examiner's note: *It is noted that the instant claims are being construed as product-by-process claims and that the product itself does not depend on the process of making it.*

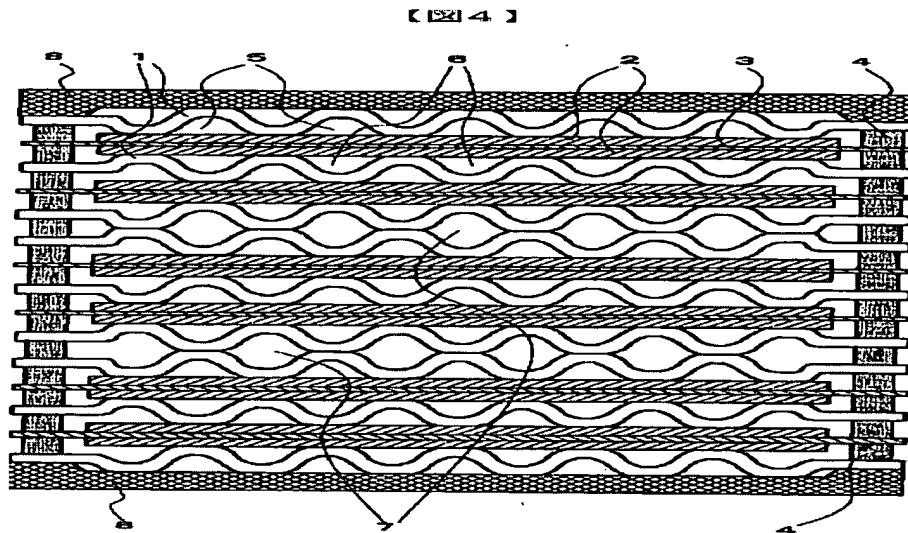
Accordingly, in a product-by-process claim, the patentability of a product does not depend on its method of production. In that, it is further noted that the product in the instant claims is the same as or obvious over the product of the prior art. In this instant case, the method limitations (i.e. the laser welding or by melting, or by irradiation by a laser beam and by solidifying) do not patentably distinguish the product because what is given patentably consideration is the product itself and not the manner in which the product was made. Therefore, the patentability of a product is independent of how it was made.

As shown above in **Figure 1**, the combination of the corrugated separators 1 and the welding parts 10 allows the formation of reactant passages 5 and 6 (See Figure 1). *Note: the part connecting separator plate 1 and diffusion layer 2 clearly forms partitions in the diffusion layer; consequently, oxidizing gas or fuel pathways are formed. Additionally, welding part 10 formed in the diffusion layer is also part of the partition formed therein.*

As for claim 6:

Figure 4 below of the JP'153 illustrates the inclusion of separator layers forming cooling water passages 7. *Note that such separator layers are joined together or bonded to form the cooling water passage structure. Enlarged portion of Figure 4 better illustrates this configuration.*





Therefore, the claims are anticipated by the JP'153. However, if the claims are not anticipated the claims are obvious as it has been held similar products claimed in product-by-process limitations are obvious *In re Brown* 173 USPQ 685 and *In re Fessman* 180 USPQ 324 (Refer to MPEP 2113: Product-by-Process Claims).

Response to Arguments

5. Applicant's arguments with respect to claims 1 and 6 have been thoroughly considered but are moot in view of the new ground(s) of rejection. Rejection under sections 102/103 based upon product-by-process limitations represents a new ground of rejections.

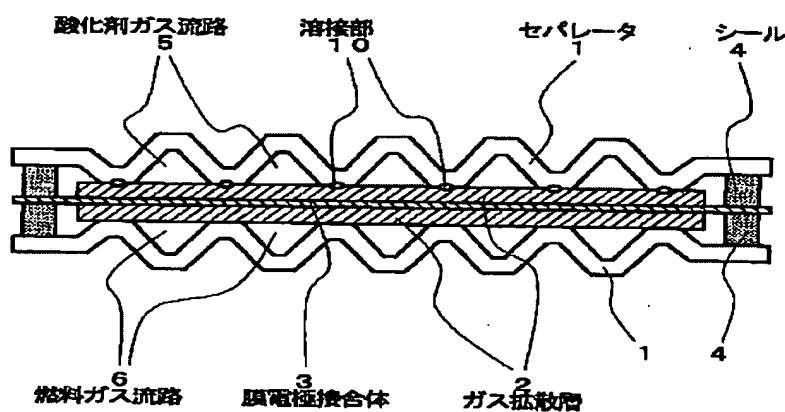
6. Although believed unnecessary due to the new ground of rejection, the examiner likes to briefly address certain arguments raised by the applicant. Having withdrawn the rejection based upon the AAPA, the examiner needs not to address any argument, whatsoever, regarding such reference.

7. Turning now to applicant's discussion on the JP'153. In response to applicant's argument about the apparent lack of "flow passages partitions formed on the diffusion layer so as to define

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a flow passage for the fuel or oxidizer in the diffusion layer” in the JP’153, the examiner states that as shown above in **Figure 1**, the combination of the corrugated separators 1 and gas diffusion layers 2, and/or the welding parts 10 allows the formation of reactant passages 5 and 6 (See Figure 1). It is strenuously noted that the part connecting separator plate 1 and diffusion layer 2 clearly forms partitions in the diffusion layer; consequently, oxidizing gas or fuel passages 5 and 6 are formed. Additionally, welding part 10 formed in the diffusion layer is also part of the partition formed therein, and such a welding part can be taken as a partition by itself, or collectively with features 1 (separators) and 3 (gas diffusion layers). Clearly, **Figure 1** shows partitions forming both fuel and oxidizer gas flow passages.

【図1】



8. In following applicant’s arguments, it is noted that it has been argued that the JP’153 “discloses that adjacent separators form a coolant passage. JP’153, however, does not disclose that a cooling layer and a separator are welded together...”. The examiner respectfully but strenuously disagrees with applicant’s full characterization of the prior art. In partial agreement with applicant’s assertion, the JP’153 discloses adjacent separators forming a coolant passage (as admitted by the applicant, see the 08/17/06 amendment paragraph bridging pages 8-9). However,

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the examiner has construed one of the adjacent separators as “*the claimed cooling layer*” as it provides essentially the same structure (i.e. cooling layer welded with the separator) as well as the same functionality (i.e. for allowing the passing of coolant) as “*the claimed cooling layer*”. It is just a matter of semantic labeling, one in which applicant prefers to call or name it “*the cooling layer*”, and the other (the JP’153) designates it “*the adjacent separator*”.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Alejandro whose telephone number is (571) 272-1282. The examiner can normally be reached on Monday-Thursday (8:00 am - 6:30 pm).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Raymond Alejandro
Primary Examiner
Art Unit 1745



RAYMOND ALEJANDRO
PRIMARY EXAMINER